Monthly Oversight Report 67
44728 AES *[46526 RAC]*
ACS NPL Site
Griffith, Indiana
July 1, 2006 – August 4, 2006

BLACK & VEATCH

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Black & Veatch Special Projects Corp.

USEPA/AES
American Chemical Service, Inc. RAO (0057-ROBE-05J7)

BVSPC Project 44728
BVSPC File C.3
August 15, 2006

Mr. Kevin Adler
U.S. Environmental Protection Agency
77 W. Jackson Boulevard (SR-6J)
Chicago, Illinois 60604-3590

Subject: Monthly Oversight Summary Report
No. 67 for July 2006

Dear Mr. Adler:

Enclosed is the Monthly Oversight Summary Report No. 67 for July 2006 for the American Chemical Service, Inc. Superfund Site in Griffith, Indiana.

If you have any questions, please call (312-683-7856) or email (campbelllm@bv.com).

Sincerely,

BLACK & VEATCH Special Projects Corp.

Larry M. Campbell, P.E.
Site Manager

Enclosure

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Monthly Oversight Summary Report No. 67
ACS Superfund Site
TO 057, 44728.238 (AES) ***[WA57, 46526.238 (RAC)]***

Reporting Period: Month of July (July 1 through August 4, 2006)
BVSPC O/S Dates: July 13 and August 4, 2006 (Mr. Campbell)

Personnel Summary Affiliation	No. of Personnel	Responsibility
Montgomery Watson Harza	2	Respondent's General Contractor
Black & Veatch Special Projects Corp.	1	USEPA Oversight Contractor
Austgen	2	General Contractor
Ryan	1	General Mechanical Contractor
Area Survey	2	Surveyors
Vidimus	2	Specialty Welding Contractor
Independent Environmental Services	2	Pump Removal Contractor

Construction Activities

Major Activities:

- Montgomery Watson Harza continued operating the groundwater treatment plant, the in-situ soil vapor extraction systems, and the air sparge systems.
- Independent Environmental Services removed and reinstalled the dual phase extraction pumps from the Still Bottoms Pond Area.
- Montgomery Watson Harza cleaned, repaired, and replaced the dual phase extraction well pumps.
- Montgomery Watson Harza removed the exhaust stack from thermal oxidizer 1 and had it repaired by Vidimus.
- Vidimus welded a patch over pin holes in the wall of thermal oxidizer 1 scrubber.
- Montgomery Watson Harza measured noise levels in Still Bottom Pond Area blower shed and found use of ear plugs provided adequate reduction of noise level to workers.
- Montgomery Watson Harza pumped product from wells SVE-53 and SVE-72.
- Montgomery Watson Harza conducted an operation and maintenance meeting at the site on July 13.

Activities Performed:

- Observed MWH continue to operate the groundwater treatment plant (GWTP) at a flow-demand rate of 22 to 40 gpm, treating 873,026 gallons during 584 of the 648 hours (90%) in the July period (June 30–July 27). MWH reported that groundwater was pumped to the plant from all trench and well sources.

- MWH reported that the GWTP was not operational during those periods when both thermal oxidizer units were not operational because of the inability to treat the gasses generated in the GWTP.
- MWH reported that Independent Environmental Services (IES) removed the dual-phase extraction (DPE) pumps from all DPE wells in the Still Bottoms Pond Area (SBPA) on July 10. MWH performed the annual servicing and cleaning of the DPE pumps in the GWTP. MWH reported that four of the DPE pumps required replacement.
- MWH reported that IES reinstalled the cleaned and serviced DPE pumps in their wells in the SBPA on August 2 and 3. MWH reported that DPE pumps could not be installed in wells SVE-61 and SVE-79 because of sludge in the wells. MWH plans to clean the sludge from the wells by jetting. BVSPC observed the DPE pump installations on August 3.
- MWH reported that it measured water levels in all monitoring locations on July 19 as part of the monthly monitoring plan.
- MWH reported that it has received a Certificate of Destruction for the two 10,000 pound granular activated carbon (GAC) tanks and associated backwash piping that were removed from the GWTP on April 12, 2006.
- Observed MWH continue to operate the Onsite Containment Area (ONCA) SBPA and Off-Site Containment Area (OFCA) in-situ soil vapor extraction (ISVE) systems, processing vapors through thermox 1 and 2.
- MWH reported that thermox 1 operated for 589 of the 648 hours (91%) in the July period, processing 1,000 cfm of vapors from the ONCA SBPA ISVE system, collecting vapors from 33 (of the total 46) ISVE wells.
- MWH reported that thermox 2 operated for 478 of the 648 hours (74%) in the July period, processing 2,000 cfm of vapors collected from all 42 OFCA ISVE wells and aeration tank T-102. MWH reported that when thermox 2 was not operable, vapors from aeration tank T-2 were processed through thermox 1.
- MWH reported that it conducted the monthly compliance sampling of thermox 1 and 2 on July 19.
- MWH reported that thermox 2 shut down because of a pH alarm on July 8. MWH reported that there is a low voltage current running through the unit that affects the pH probe. Austgen Electric investigated the grounding of this unit and believes it has resolved the grounding issue.
- MWH reported that most of the non-operational time for thermox 2 was associated with the investigation of the grounding issue, rather than any operational problems with the unit itself.
- MWH reported that it used a crane on August 1 to raise the exhaust stack from the scrubber of thermox 1 to replace a gasket. MWH reported that the stack was badly corroded. MWH removed the stack and transported it to Vidimus for welding repair of the Hastalloy™ metal stack. MWH reported the repaired stack will be reinstalled early in the next reporting period.
- MWH reported that it cleaned the nozzles and interior of thermox 1 scrubber and found a number of pin-holes through the side of the unit near the location of the gas vapor inlet port. BVSPC observed Vidimus weld a Hastalloy™ steel patch over the pinholes on August 3.

- MWH reported that thermox 2 was shut down for safety reasons during the periods when personnel were working on thermox 1.
- MWH reported that it had measured noise levels in the blower shed in response to a safety concern regarding the adequacy of worker's hearing protection. MWH reported recording a noise level of 104 A-weighted decibels (dBA). MWH's Safety Director concluded that use of ear plugs should reduce the noise level received by a worker to 81 dBA, below the OSHA standard of 85 dBA.
- MWH reported that emergency shut-off switches are located in the control rooms adjacent to both the SBPA and OFCA blower sheds. MWH agreed to install signs indicating the locations of the emergency shut-off switches.
- MWH reported that it pumped 49 gallons of free product from ISVE well SVE-53 in the SBPA on June 30 and July 21 and 38 gallons of free product from well SVE-72 on June 29 and August 18. Product was collected in a drum at the surface and transported to the GWTP and transferred to oil holding tank T-6.
- MWH reported that in late June, air was being injected into the SBPA through Group 2 wells (SVE-49, -51, -65, -71, and -82), each flowing at about 20 cfm. MWH reported that it attempted to switch air injection to Group 3 wells on July 19, but found that three of the five gate valves in the SBPA blower shed were not functioning properly; clean air short-circuited through the valves and was not delivered to the injection wells, but rather flowed directly to the SVE vacuum blower. MWH then switched to Group 1 wells and found two malfunctioning valves in that group (SVE-50 and -79). MWH reported that air was injected through three (SVE -54, -73, and -81) of the five Group 1 wells in July through late August. MWH plans to replace the faulty gate valves.
- MWH reported that Area Survey was onsite on July 13 to survey the proposed locations of the sentinel wells to be installed in the lower aquifer north of the site. MWH reported that the purpose of the survey was to ascertain the correct property owner at the proposed locations of the new sentinel wells in order to gain access permission for these wells.
- Completed monthly oversight report (with field notes and photographs) for the June reporting period. Submitted Monthly Oversight Summary Report No. 66 to EPA on July 17.
- Site Manager provided periodic reports of field activities to the EPA TOPO via telephone and E-mail.

Topics of Concern: None

Concern Resolution: None

Upcoming Activities:

- MWH to continue operating the GWTP and the OFCA and ONCA SBPA ISVE and air sparge systems.
- MWH to continue operating Group 1 air injection wells in the SBPA.
- MWH to monitor odors in the ACS break room.
- MWH to continue pumping product from selected ONCA SBPA DPE wells.
- MWH to jet sludge from selected DPE wells.
- MWH to conduct Lower Aquifer Phase 3 Investigation, including installation of

additional long-term groundwater monitoring network wells, installation of pumps in existing lower aquifer wells in the area of MW53, and burial of conveyance piping and electrical and control conduit from the area of MW53 to the GWTP.

- MWH will continue construction coordination meetings at the site when field activities warrant such meetings.
- MWH will continue monthly O&M meetings to report on operation of active treatment systems.

Signature: Larry Campbell Date: August 15, 2006

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SITE STATUS MEETING MINUTES
FOR JULY 13, 2006 MEETING
AMERICAN CHEMICAL SERVICE, NPL SITE
GRIFFITH, INDIANA

MEETING DATE: Thursday, July 13, 2006

MEETING TIME: 12:00 p.m.

MEETING LOCATION: ACS Site

ATTENDEES:
Larry Campbell – Black & Veatch
Prabhakar Kasarabada – IDEM
Kevin Adler – U.S. EPA
Peter Vagt – MWH
Chris Daly – MWH
Lee Orosz – MWH
David Powers – MWH
Justin Finger – MWH

TOPICS:

SITE STATUS

General Site Health and Safety

There have been no health and safety incidents since the last meeting held on June 2nd. High temperatures and humidity may present health and safety risks. Biological hazards such as bees, wasps, mosquitoes, and poison ivy continue to be present.

During the past month, the air compressor for the GWTP was removed and replaced with the new one. Health and safety concerns included the use of a forklift and numerous pinch points. The work was performed methodically to ensure a safe working environment. As a result, no health and safety incidents occurred while this work was performed.

The blower motor from Blower 103 was replaced during the week of July 10th. An engine hoist was rented to perform the task. No health and safety incidents occurred during the replacement activities.

Concern has been raised about noise levels in the blower sheds and whether the provided hearing protection is adequate for workers that spend extended time periods in the building while the blower is active. Noise levels were measured at 104 A-weighted decibels (dBA). The information was forwarded to MWH's Safety Director who reviewed the information and determined that the level of noise protection utilized is adequate. The hearing protection (ear plugs) available near the entrance of each blower shed, have Noise Reduction Ratings (NRR) of 30 dBA. By following the guidelines provided by 29 CFR 1910.95 Appendix B), the noise received by the user's ears is 81

dBA. This level is below the OSHA standard of 85 decibels and is considered to be adequate. The appropriate method for installing hearing protection should be reviewed during the health and safety briefing before blower shed activity. This method includes: 1) Roll the ear plug in order to compress it. 2) Reach around the back of the head with one hand to pull up on the ear lobe in order to straighten the ear canal. 3) Using the other hand, insert the ear plug.

Groundwater Treatment Plant (GWTP) Status

The GWTP operated 87 percent of the time from May 26th to June 30th (732 out of 840 hours). The majority of this downtime was due to the installation of the new compressor, repair of the power transformer outside the GWTP, and moving the carbon units in order to have the GWTP floors redone.

On Monday, July 10th, the dual phase pumps were removed for annual servicing and cleaning.

Off-Site Area/SBPA ISVE Systems

The Off-Site Area In-situ Soil Vapor Extraction (ISVE) System was operational for 83 percent of the time from May 26 to June 30, 2006 (29 out of 35 days). All 42 ISVE wells and 3 air sparge wells are active.

The Still Bottoms Pond Area (SBPA) ISVE system was operational for 71 percent of the time from May 26 to June 30, 2006 (25 out of 35 days). Air Injection Well Group 1 (SVE-50, SVE-54, SVE-73, SVE-79, and SVE-81) and associated ISVE wells were active until June 22nd. On June 22nd, operation was switched to Well Group 2 (SVE-49, SVE-51, SVE-65, SVE-71, and SVE-82).

Thermal Oxidizer 1 (ThermOx 1) had a valve and thermal coupling malfunction. The necessary repairs have been made.

On Saturday, July 8th, Thermal Oxidizer 2 (ThermOx 2) shut down due to a pH alarm. A low voltage current running through the unit is affecting the pH probe. When the probe is removed and tested in a buffer solution, it reads correctly. Therefore, it appears that the problem is not with the probe itself but related to a grounding problem. Austgen Electric is currently investigating the source of the ground fault.

During the month of June, 85 gallons of free product were removed from SVE-53, and 20 gallons of free product were removed from SVE-72. MWH is currently looking into the possibility of burning off the collected free product through the thermal oxidizers.

Interaction with ACS Facility and Community

During a conversation with Tom Froman of ACS, he stated ACS has been making many upgrades in the past three to four weeks. They are anticipating the production of a new product for an undisclosed client in the near future. ACS will be hiring five new employees and plans to add additional employees when these operations begin.

Current Issues

MWH is currently preparing for Phase 3 of the Lower Aquifer Investigation, including installation of the sentinel wells and construction of the pumping system. On Thursday, July 13th, Area Survey of Orland Park, Illinois was on site to survey the proposed location of the sentinel wells. Drilling will be performed by Boart Longyear of Indianapolis, Indiana, and is tentatively scheduled to begin in August. Installation of the piping and pumps is also scheduled for August.

MISCELLANEOUS

Kevin Adler of the U.S. EPA addressed the issue of emergency shut-off switches for the ISVE blower sheds. MWH informed him that emergency shut-off switches are located in the control rooms adjacent to both the SBPA and Off-site blower sheds. MWH agreed to install a sign on both the On and Off-Site blower sheds indicating the location of the emergency shut-off switches.

At the end of the meeting, Kevin Adler reviewed several questions and concerns regarding the Lower Aquifer Extraction System Plan, submitted to the Agencies on June 29, 2006. MWH provided clarification and explanations to each question. Kevin said he would provide the comments in an email, but that MWH would not need to provide a formal written response to comments.

LOOK AHEAD

Field Events

- ISVE System Monitoring – July 19, 2006
- Phase 3 Field Activities, Lower Aquifer Investigation – August 2006

Reports

- Quarterly Status Report, 2nd Quarter – July 2006
- Chemical Oxidation Fourth Full-Scale Application Report – August 2006
- Quarterly Monitoring Report, Active Treatment Systems, 2nd Quarter – August 2006

Health & Safety Look Ahead

- Special precautions should be taken to avoid slip hazards associated with condensation from pipes in the GWTP.
- Special precautions should be taken to avoid heat stress associated with increasing summer temperatures.
- Special precautions should be taken to avoid biological hazards such as bees, wasps, mosquitoes, and poison ivy.
- Proper PPE should be worn during monthly ISVE system monitoring.
- Precautions should be taken during trenching activities associated with the Phase 3 Lower Aquifer Investigation. The proposed trench will cross power lines, water lines, and the Perimeter Groundwater Containment System.

Future Meetings

Monthly Site Status Meeting – Friday, August 11, 2006, 10 a.m. at the MWH Chicago office.

JEF/CAD/PJV
J:\405\0577 ACS\0101 PM\Meetings\Meeting Minutes 2006\ACS Meeting Minutes 7-13-06.doc

Remedial Progress Report	July-06	Report Date: 8/7/2006

GWTP & Dewatering

The GWTP was operational for 584 out of 648 hours (90%) from June 30 to July 27
Total Gallons treated = 873,026 gallons since 6/30/06 (27 days)

Tables, Graphs & Figures
Table - Effluent Summary
Graphs - Off-Site Dewatering
Graphs - SBPA Dewatering

SBPA ISVE System

System operational 589 out of 648 hours (91%) from June 30 to July 27
System monitoring was conducted on 7/19/06.
The next monitoring event is scheduled for 8/18/06.

Tables, Graphs & Figures
Table - Sampling Data
Graph - Mass Extraction
Graph - Total VOC Removal

Product Removal

	06/29/06	06/30/06	07/18/06	07/21/06
SVE-52	-	-	-	-
SVE-53	-	35 gal	-	14 gal
SVE-62	-	-	-	-
SVE-72	20 gal	-	18 gal	-
SVE-88	-	-	-	-
DPE 61	-	-	-	-

Current Status

Active Wells (33 of 46)	
SVE-43	SVE-66
SVE-44	SVE-67
SVE-45	SVE-68
SVE-46	SVE-69
SVE-47	SVE-70
SVE-48	SVE-71
SVE-49	SVE-74
SVE-51	SVE-75
SVE-55	SVE-76
SVE-56	SVE-80
SVE-57	SVE-82
SVE-58	SVE-83
SVE-59	SVE-84
SVE-60	SVE-85
SVE-63	SVE-86
SVE-64	SVE-87
SVE-65	-
Air Injection Wells (Group 1)	
SVE-50 (OFF)	
SVE-54	
SVE-73	
SVE-79 (OFF)	
SVE-81	

Off-Site ISVE System

System operational 478 out of 648 hours (74%) from June 30 to July 27
System monitoring was conducted on 7/19/06.
The next monitoring event is scheduled for 8/18/06.

Tables, Graphs & Figures
Table - Sampling Data
Graph - Mass Extraction
Graph - Total VOC Removal

Current Status

Active Wells (42 of 42)	
SVE-01	SVE-22
SVE-02	SVE-23
SVE-03	SVE-24
SVE-04	SVE-25
SVE-05	SVE-26
SVE-06	SVE-27
SVE-07	SVE-28
SVE-08	SVE-29
SVE-09	SVE-30
SVE-10	SVE-31
SVE-11	SVE-32
SVE-12	SVE-33
SVE-13	SVE-34
SVE-14	SVE-35
SVE-15	SVE-36
SVE-16	SVE-37
SVE-17	SVE-38
SVE-18	SVE-39
SVE-19	SVE-40
SVE-20	SVE-41
SVE-21	SVE-42

Comments

Data presented herein is for informational purposes only. Not all data presented in this report has been validated.

Table
Summary of Effluent Analytical Results
Groundwater Treatment System
American Chemical Service NPL Site
Griffith, Indiana

Event Date	Month 108 5/4/2006	Month 109 6/1/2006	Month 110 7/11/2006	Effluent Limits	Lab Reporting Limits
pH	7.53	7.47 /J	7.08	6-9	none
TSS	NS	NS	1.4	30	10
BOD	NS	NS	2.0 U/	30	2
Arsenic	NS	NS	4.1 B/	50	3.4
Beryllium	NS	NS	0.20 U/	NE	0.2
Cadmium	NS	NS	0.20 U/	4.1	0.3
Manganese	NS	NS	0.64 B/	NE	10
Mercury	NS	NS	0.10 U/	0.02 (w/DL = 0.64)	0.64
Selenium	NS	NS	1.8 U/	8.2	4.3
Thallium	NS	NS	3.3 U/	NE	5.7
Zinc	NS	NS	2.7 B/	411	1.2
Benzene	0.50 U/	0.50 U/	0.50 U/	5	0.5
Acetone	2.5 U/	2.5 U/UJ	2.5 U/	6,800	3
2-Butanone	2.5 U/	2.5 U/	2.5 U/	210	3
Chloromethane	0.50 U/	0.50 U/UJ	0.50 U/	NE	0.5
1,4-Dichlorobenzene	0.50 U/	0.50 U/	0.50 U/	NE	0.5
1,1-Dichloroethane	0.50 U/	0.50 U/	0.50 U/	NE	0.5
cis-1,2-Dichloroethene	0.50 U/	0.50 U/	0.29 J/	70	0.5
Ethylbenzene	0.50 U/	0.50 U/	0.50 U/	34	0.5
Methylene chloride	0.50 U/	0.45 J/	0.42 J/	5	0.6
Tetrachloroethene	0.50 U/	0.50 U/UJ	0.50 U/	5	0.5
Trichloroethene	0.50 U/	0.50 U/	0.50 U/	5	0.5
Vinyl chloride	0.50 U/	0.50 U/	0.84	2	0.5
4-Methyl-2-pentanone	2.5 U/	2.5 U/	2.5 U/	15	3
bis (2-Chloroethyl) ether	NS	NS	ND	9.6	9.6
bis(2-Ethylhexyl) - phthalate	NS	NS	ND	6	6
4 - Methylphenol	NS	NS	ND	34	10
Isophorone	NS	NS	ND	50	10
Pentachlorophenol	NS	NS	ND	1	1
PCB/Aroclor-1016	NS	NS	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1221	NS	NS	ND	0.00056 (w/DL = 0.1 to 0.9)	0.92*
PCB/Aroclor-1232	NS	NS	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1242	NS	NS	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1248	NS	NS	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1254	NS	NS	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5
PCB/Aroclor-1260	NS	NS	ND	0.00056 (w/DL = 0.1 to 0.9)	0.5

Notes:

Bolded result indicates a exceedence of the discharge limit
pH data is expressed in S.U.
Metals, VOC, SVOC and PCB data is expressed in ug/L
ND = Not detected
NS = This analyte was not sampled or analyzed for
NE = No effluent limit established.
DL = Detection limit
* = Approved SW-846 method is incapable of achieving effluent limit.

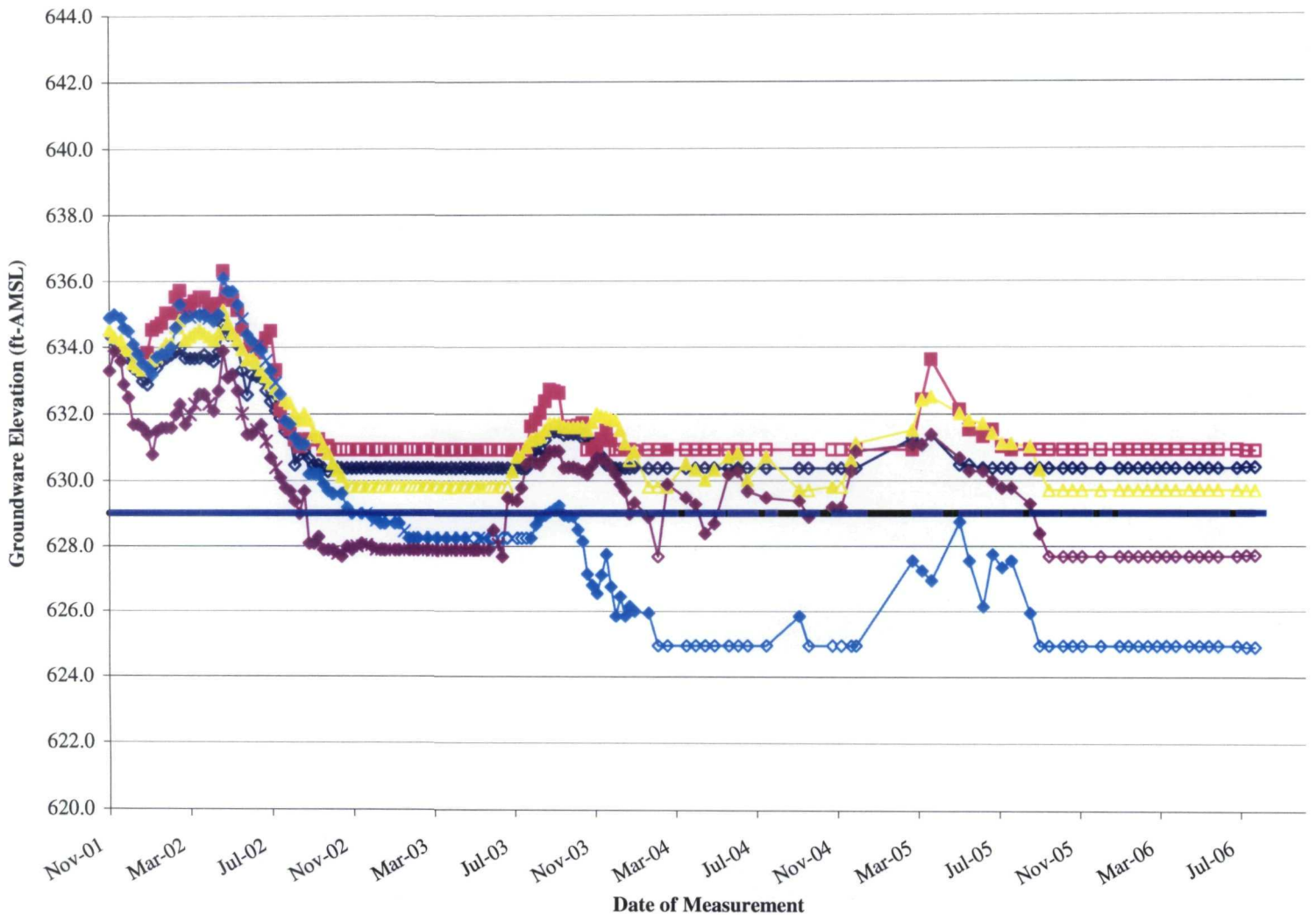
DRAFT VERSION
For Informational Purposes Only

Not all data presented here has been validated.
Notes and suffix definitions have not been updated.

Suffix Definitions:

_/ = Data qualifier added by laboratory
/_ = Data qualifier added by data validator
J = Result is estimated
B = Compound is also detected in the blank
UJ = Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value
JB = Result is detected below the reporting limit and is an estimated concentration. The compound is also detected in the method blank resulting in a potential high bias
UB = Compound or analyte is not detected at or above the indicated concentration due to blank contamination
UBJ = Analyte is not detected at or above the indicated concentration due to blank contamination, however the calibration was out of range. Therefore the concentration is estimated.

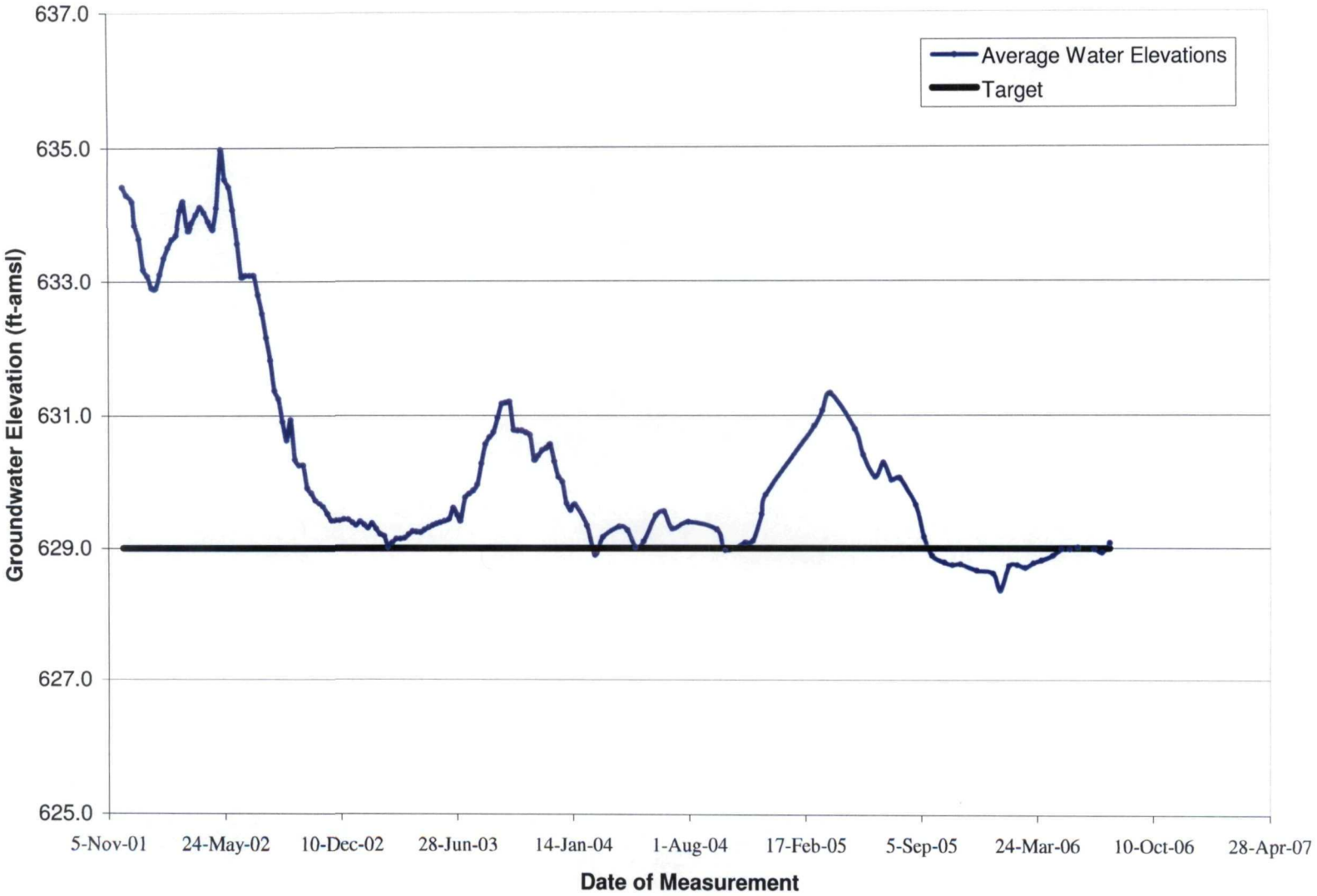
Figure 1
SBPA Water Level Status
ACS NPL Site
Griffith, Indiana



Notes:
1. Hollow points represent dry piezometers (data used for graphing purposes only).
2. The bottom elevation of the piezometers may vary due to silting of the well or removal of silt.

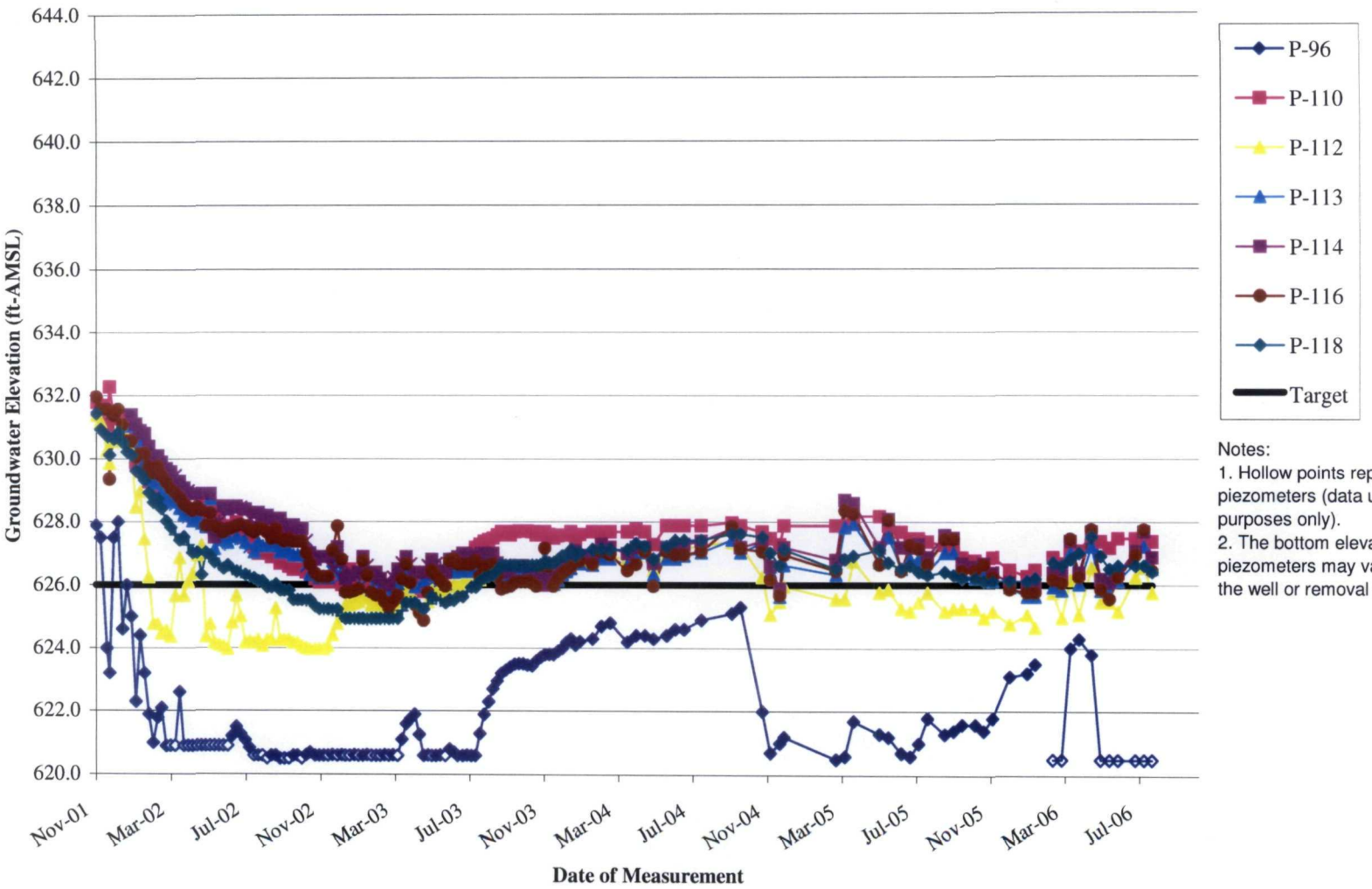
JEF/CDC/CAD
J:/209/0603ACS/0301 GWTP/BWES Data/BWES Performance.2006.xls/On-Site Chart

On-Site Average Water Elevations



JEF/TPC/CDC
209\0603 ACS\0301 GWTP\BWES and Dewatering Data\BWES Performance.2006.xls[On-Site Average Chart]

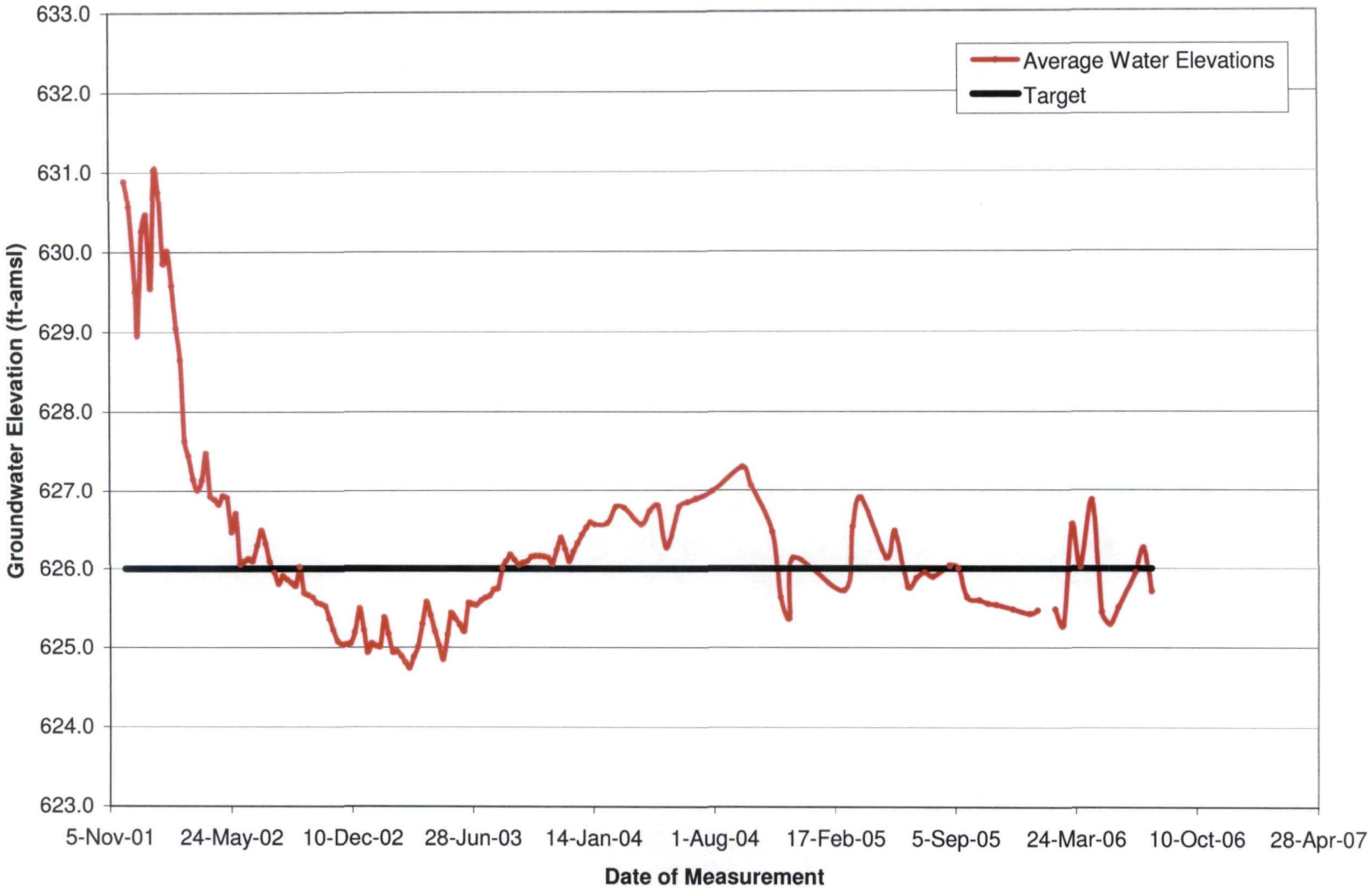
Figure 3
Off-Site Water Level Status - Piezometers
Groundwater Monitoring
ACS NPL Site
Griffith, Indiana



Notes:
1. Hollow points represent dry piezometers (data used for graphing purposes only).
2. The bottom elevation of the piezometers may vary due to silting of the well or removal of silt.

JEF/CDC/CAD
J:/209/0603 ACS/0301 GWTP/BWES and Dewatering Data/BWES Performance.2006.xls/Off-Site Chart

Off-Site Average Elevations



JEF/TPC/CDC
209\0603 ACS\0301 GWTP\BWES and Dewatering Data\BWES Performance.2006.xls[Off-Site Average Chart]

Table 3
SBPA and Off-Site ISVE System Results
for Method TO-14 (VOCs) - June 2006
American Chemical Service
Griffith, Indiana

		Sampled 6/15/2006			
Compounds	**Units**	**SBPA ISVE**		**Off-Site ISVE**	
1,1,1-Trichloroethane	ppbv	33,000		22,000	
1,1,2,2-Tetrachloroethane	ppbv	ND	U	ND	U
1,1,2-Trichloroethane	ppbv	ND	U	140	J/J
1,1-Dichloroethane	ppbv	3,400		2,700	
1,1-Dichloroethene	ppbv	180	J/J	84	J/J
1,2-Dichloroethane	ppbv	520		760	
1,2-Dichloropropane	ppbv	570		180	
2-Butanone (Methyl Ethyl Ketone)	ppbv	1,200		5,900	
2-Hexanone	ppbv	ND	U	ND	U
4-Methyl-2-pentanone	ppbv	1,700		3,100	
Acetone	ppbv	3,600		9,700	
Benzene	ppbv	6,100		12,000	
Bromodichloromethane	ppbv	ND	U	ND	U
Bromoform	ppbv	ND	U	ND	U
Bromomethane	ppbv	ND	U	ND	U
Carbon Disulfide	ppbv	360	J/J	300	J/J
Carbon Tetrachloride	ppbv	ND	U	ND	U
Chlorobenzene	ppbv	ND	U	ND	U
Chloroethane	ppbv	380		ND	U
Chloroform	ppbv	10,000		1,800	
Chloromethane	ppbv	ND	U	ND	U
cis-1,2-Dichloroethene	ppbv	21,000		1,700	
cis-1,3-Dichloropropene	ppbv	ND	U	ND	U
Dibromochloromethane	ppbv	ND	U	ND	U
Ethyl Benzene	ppbv	11,000		7,900	
m,p-Xylene	ppbv	51,000		34,000	
Methylene Chloride	ppbv	8,300		19,000	
o-Xylene	ppbv	23,000		12,000	
Styrene	ppbv	ND	U	ND	U
Tetrachloroethene	ppbv	56,000		18,000	
Toluene	ppbv	64,000		64,000	
trans-1,2-Dichloroethene	ppbv	150	J/J	ND	U
trans-1,3-Dichloropropene	ppbv	ND	U	ND	U
Trichloroethene	ppbv	30,000		15,000	
Vinyl Chloride	ppbv	1,400		150	J/J
Total	**ppbv**	**326,860**		**230,414**	
Total	**lb/hr**	**8.106**		**4.984**	

Notes:
NC - Not calculated
ND - Non-detect
ppbv - parts per billion volume
lb/hr - pounds per hour

Qualifiers:
J - Result is estimated
U - below reported quantitation limit
_/ - Laboratory data qualifier
/_ - Data validation qualifier

VOCs in lb/hr calculated based on Offsite: 1530 scfm, 75 F (6/15/06); On-site: 1580 scfm, 110 F (7/19/06)

CRS/CDC/CAD
J:\209\0603 ACS\0301 GWTP\Cat-Ox Therm-Ox Sampling\2006\2nd Qtr 2006\June 2006 Results.xls\TO-14 ISVE

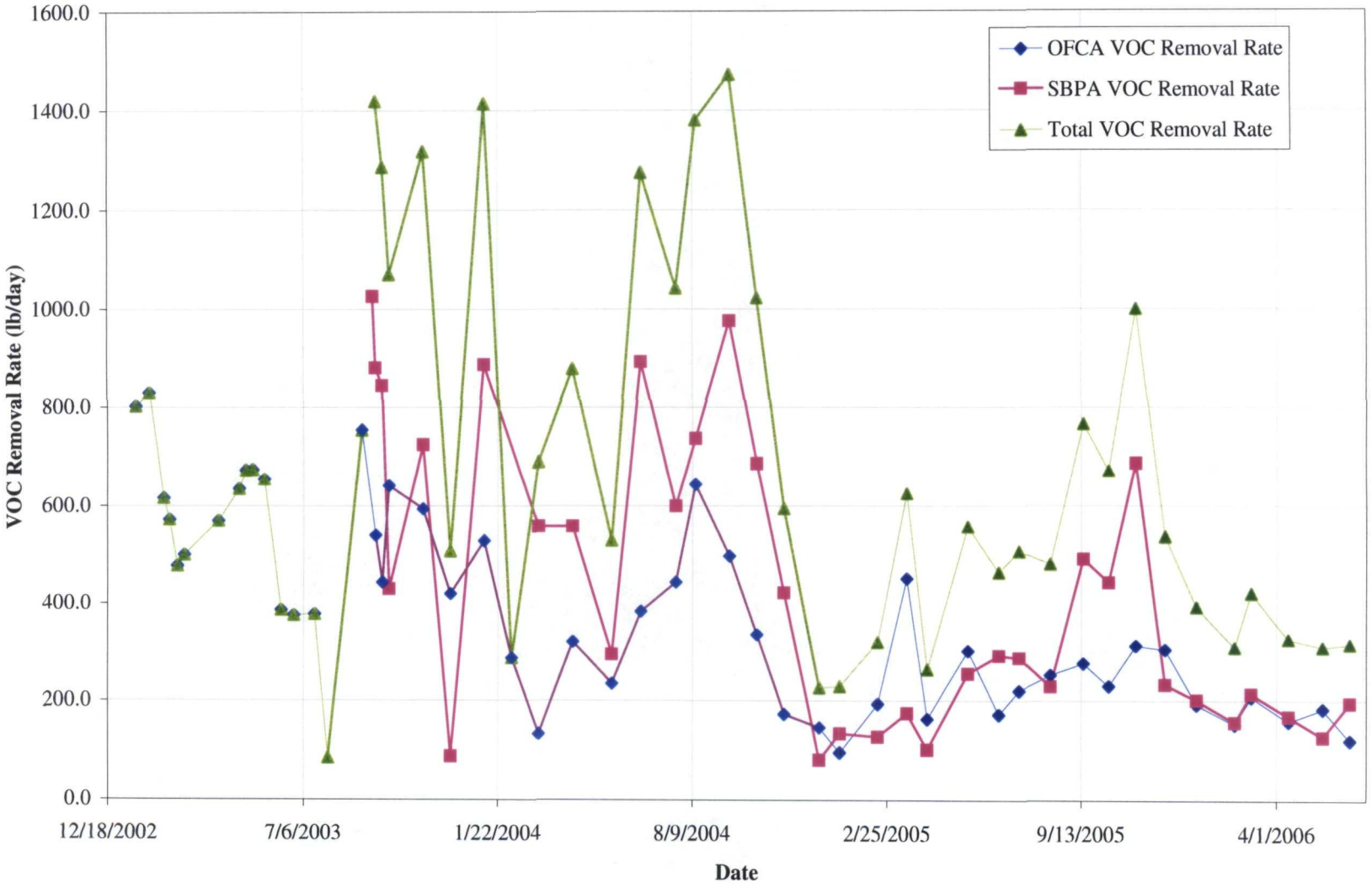
Table 6
SBPA and Off-Site ISVE System Results
for Method TO-13 (SVOCs) - June 2006
American Chemical Service
Griffith, Indiana

		Sampled 6/15/2006			
Compounds	**Units**	**SBPA ISVE**		**Off-Site ISVE**	
1,2,4-Trichlorobenzene	µg	ND	U	0.88	J/J
1,2-Dichlorobenzene	µg	5.6		24	
1,3-Dichlorobenzene	µg	0.48	J/J	0.76	J/J
1,4-Dichlorobenzene	µg	1.2		2.8	
2,4,5-Trichlorophenol	µg	ND	U	ND	U
2,4,6-Trichlorophenol	µg	ND	U	ND	U
2,4-Dichlorophenol	µg	ND	U	ND	U
2,4-Dimethylphenol	µg	ND	U	ND	U
2,4-Dinitrophenol	µg	ND	U	ND	U
2,4-Dinitrotoluene	µg	ND	U	ND	U
2,6-Dinitrotoluene	µg	ND	U	ND	U
2-Chloronaphthalene	µg	ND	U	ND	U
2-Chlorophenol	µg	ND	U	ND	U
2-Methylnaphthalene	µg	0.93	J/J	4.2	
2-Methylphenol (o-Cresol)	µg	ND	U	ND	U
2-Nitroaniline	µg	ND	U	ND	U
2-Nitrophenol	µg	ND	U	ND	U
3,3'-Dichlorobenzidine	µg	ND	U	ND	U
3-Nitroaniline	µg	ND	U	ND	U
4,6-Dinitro-2-methylphenol	µg	ND	U	ND	U
4-Bromophenyl-phenyl Ether	µg	ND	U	ND	U
4-Chloro-3-methylphenol	µg	ND	U	ND	U
4-Chloroaniline	µg	ND	U	ND	U
4-Chlorophenyl-phenyl Ether	µg	ND	U	ND	U
4-Methylphenol/3-Methylphenol	µg	ND	U	ND	U
4-Nitroaniline	µg	ND	U	ND	U
4-Nitrophenol	µg	ND	U	ND	U
Acenaphthene	µg	ND	U	ND	U
Acenaphthylene	µg	ND	U	ND	U
Anthracene	µg	ND	U	ND	U
Benzo(a)anthracene	µg	ND	U	ND	U
Benzo(a)pyrene	µg	ND	U	ND	U
Benzo(b)fluoranthene	µg	ND	U	ND	U
Benzo(g,h,i)perylene	µg	ND	U	ND	U
Benzo(k)fluoranthene	µg	ND	U	ND	U
bis(2-Chloroethoxy) Methane	µg	ND	U	ND	U
bis(2-Chloroethyl) Ether	µg	0.84	J/J	2.1	
bis(2-Ethylhexyl)phthalate	µg	8.6		3.4	J/J
Butylbenzylphthalate	µg	ND	U	ND	U
Chrysene	µg	ND	U	ND	U
Dibenz(a,h)anthracene	µg	ND	U	ND	U
Dibenzofuran	µg	ND	U	ND	U
Diethylphthalate	µg	ND	U	1.4	J/J
Dimethylphthalate	µg	ND	U	ND	U
di-n-Butylphthalate	µg	ND	U	ND	U
Di-n-Octylphthalate	µg	ND	U	ND	U
Fluoranthene	µg	ND	U	ND	U
Fluorene	µg	ND	U	ND	U
Hexachlorobenzene	µg	ND	U	ND	U
Hexachlorobutadiene	µg	0.92	J/J	2	
Hexachlorocyclopentadiene	µg	ND	U	ND	U
Hexachloroethane	µg	ND	U	ND	U
Indeno(1,2,3-c,d)pyrene	µg	ND	U	ND	U
Isophorone	µg	ND	U	12	
Naphthalene	µg	1.6		22	
Nitrobenzene	µg	ND	U	ND	U
N-Nitroso-di-n-propylamine	µg	ND	U	ND	U
N-Nitrosodiphenylamine	µg	ND	U	ND	U
Pentachlorophenol	µg	ND	U	ND	U
Phenanthrene	µg	ND	U	ND	U
Phenol	µg	ND	U	ND	U
Pyrene	µg	ND	U	ND	U
Total	µg	**20.17**		**75.54**	

Notes:
µg - Microgram
NC - Not calculated
ND - Non-detect

Qualifiers:
J - Result is estimated
U - below reported quantitation limit
_/ - Laboratory data qualifier
/_ - Data validation qualifier

VOC Removal Rate
American Chemical Services NPL Site, Griffith, IN



CDC/
J:\jobs\405\0577 ACS\0201 Engr\Remedial System Metrics\ISVE\ISVE Mass Removal.xls\VOC Removal Rate

Total VOCs Removed
American Chemical Services NPL Site, Griffith, IN

CDC/CAD
J:\jobs\405\0577 ACS\0201 Engr\Remedial System Metrics\ISVE\ISVE Mass Removal.xls\Total VOCs Removed

CONTENTS

PAGE NO.	REFERENCE	DATE

13 July 06

1150 Arrive Onsite - warm calm, partly cloudy

Personnel Onsite

Lee Cross	MWH
Chris Daly	"
Mike Brisbin	Austgen
Justin Finger	MWH
Tim Kirkland	Austgen
Gary Bonaguidi	Area Survey
Jesse Munsell	" "
David Powers	MWH
Peter Vagt	"
Larry Campbell	BUSPC
Kevin Adler	USEPA
Pat Baker	IDEM

1200-1240 Lunch provided by MWH

1240 OU M Mtg ~~(see pg 2 for notes)~~

1340 Mtg Over

1442 Photo 88-9 looking SW at newly created floor in GWTP

1443 Photo 88-10 looking S at relocated GAC tanks in GWTP to recent floor

JM Campbell

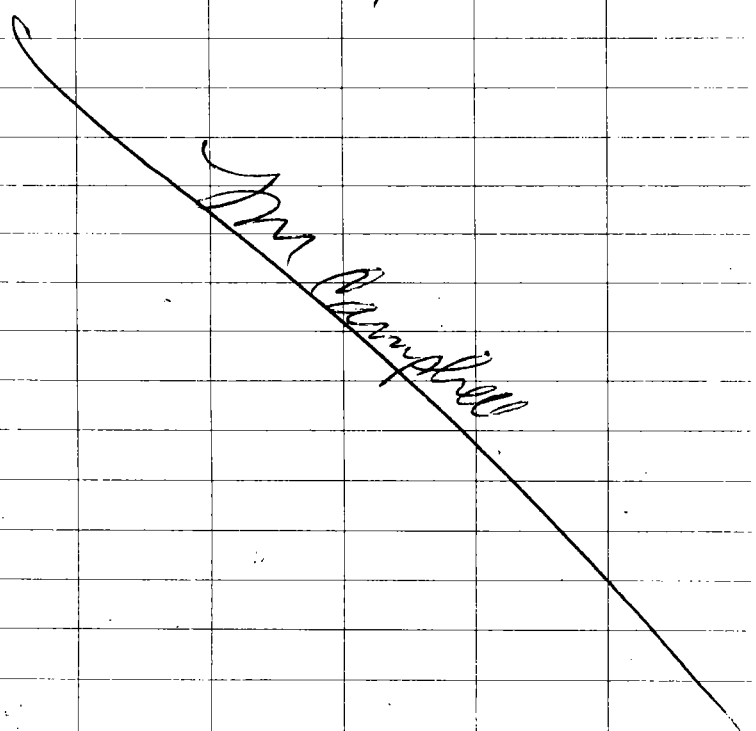
(2)

1444 Photo 88-11 looking S at pipes from SBPA Dual Phase pumps

1445 Photo 88-12 looking SE at dual phase extraction pumps removed from SBPA for cleaning

1446 Photo 88-13 looking down at end of dual phase piping showing black product that leaked from pipe

1500 Left site for day



(3)

Thurs 3 Aug 06

1000 Arrive onsite. Overcast warm humid calm rain in early AM 73°F

Personnel Onsite

Lee Orosz	IMCOM
Tim Kirkland	Austgen
Mike Petrich	Independent Env't Svcs
Ryan Lancaster	" " "
Mark Fasak	Vidumos
Roland Butler	"
Larry Humphrey	BVSRC

1010 Photo 88-18 looking N at cleaned DPE pumps on trailer to be moved to SBPA for installation by IES

1015 Discuss w Lee Orosz

- Heavy rain during night of failed sump pump caused some flooding inside GWTP. This rainwater was pumped to wetlands w/o treatment
- On Thurs. Aug 1, IMCOM removed exhaust stack from thermal to replace leaking gasket, but found the stack was badly eroded at flange near flange.

Mwit removed eroded stake & took to Vidimus for repair
- Mwit cleaned nozzles & interior of thermox (& found pin hole leaks on side of unit near location of gas vapor inlet port. Vidimus welded patch today on side of thermox 1 unit
- Thermox 2 down for safety while working on Thermox 1.

1045 Go to SVE11 to observe IES re-installing DPE Pumps
1050 Photo 88-19 looking down at IES tech installing clamp on air line to DPE pump
1052 Photo 88-20 looking E at IES installing DPE pump in SVE57 well
1055 Photo 88-21 looking N at IES preparing to install ~~DPE~~ the DPE pump in SVE55 well
1058 Photo 88-22 looking N at IES observing orientation of pitless adapter in well SVE63
1059 Photo 88-23 looking N at IES

JM Campbell

preparing to lower DPE pump in to SVE63
1100 Photo 88-24 looking N at IES lowering DPE pump to final depth & connecting air hose in well
1104 Photo 88-25 looking W at IES installing pitless adapter onto well SVE61 26 pm
1115 Photo 88-25 looking up showing missing stake on thermox 1. Note hole in roof for stake
1116 Photo 88-26 27 pm looking W at Vidimus welding patch on thermox 1
1120 Observed Mwit remove polymer Tank from elevated stand & remove congealed polymer from Tank
1135 Observed IES pressurize newly installed DPE pumps & check for air leaks. Found 1 DPE pump leaking. Replaced O ring in pitless adapter
1200 Left site for day

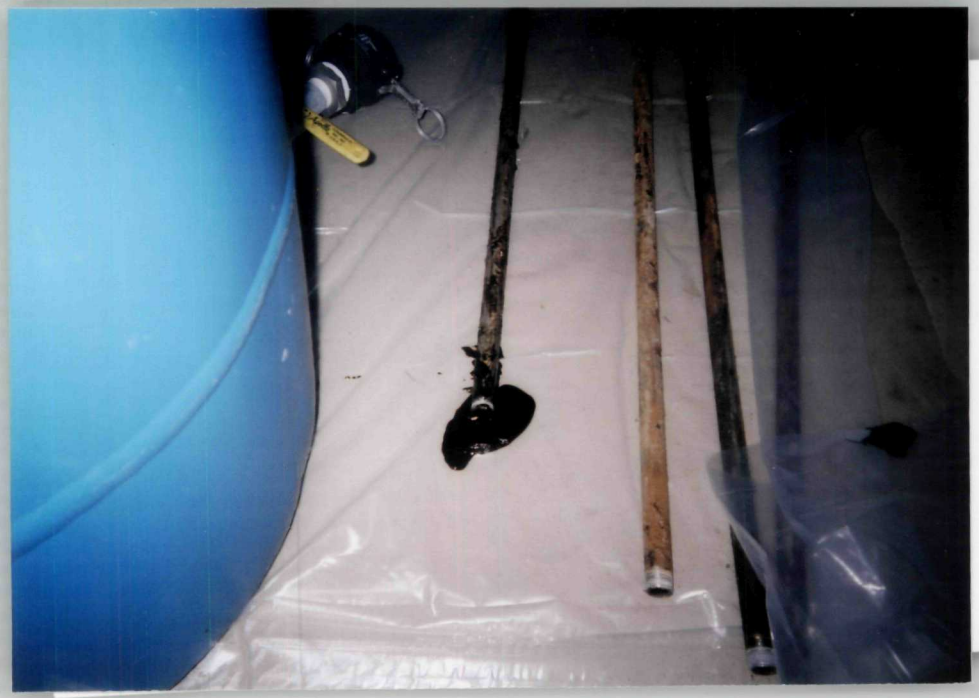
JM Campbell

Site: American Chemical Service, Inc.
Proj. #: 44728 AES [46526 RAC]
Roll: 88 Photo #9
Date: 7-13-06 Time: 1442
Photographer: Larry Campbell
Description: Photo facing southwest showing newly recoated floor in GWTP.

Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 88 Photo #10
Date: 7-13-06 Time: 1443
Photographer: Larry Campbell
Description: Photo facing south showing relocated GAC tanks so floor could be recoated.

Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 88 Photo #11
Date: 7-13-06 Time: 1444
Photographer: Larry Campbell
Description: Photo facing south showing riser pipes from SBPA ISVE DPE pumps.

Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 88 Photo #12
Date: 7-13-06 Time: 1445
Photographer: Larry Campbell
Description: Photo facing southeast showing dual phase extraction (DPE) pumps removed from SBPA wells for cleaning.



Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 88 Photo #13
Date: 7-13-06 Time: 1446
Photographer: Larry Campbell
Description: Photo facing down looking at end of dual phase riser pipe showing black product that had leaked from pipe.

Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 88 Photo #18
Date: 8-03-06 Time: 1010
Photographer: Larry Campbell
Description: Photo facing north showing cleaned dual phase extraction (DPE) pumps and risers on trailer to be moved to SBPA for installation by Independent Environmental Services (IES) personnel.

Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 88 Photo #19
Date: 8-03-06 Time: 1050
Photographer: Larry Campbell
Description: Photo facing down looking at IES technician installing clamp on air line to DPE pump.

Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 88 Photo #20
Date: 8-03-06 Time: 1052
Photographer: Larry Campbell
Description: Photo facing east showing IES technicians installing DPE pump in well SVE57. Note use of respirators when working in close proximity to open well.

Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 88 Photo #21
Date: 8-03-06 Time: 1055
Photographer: Larry Campbell
Description: Photo facing north showing IES technician preparing to install DPE pump in well SVE55.

Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 88 Photo #22
Date: 8-03-06 Time: 1058
Photographer: Larry Campbell
Description: Photo facing north showing IES technician at well is checking the orientation of the pitless adaptor for proper alignment of the riser pipe in well SVE63..

Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 88 Photo #23
Date: 8-03-06 Time: 1059
Photographer: Larry Campbell
Description: Photo facing north showing IES technician preparing to lower DPE pump into well SVE63.

Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 88 Photo #24
Date: 8-03-06 Time: 1100
Photographer: Larry Campbell
Description: Photo facing north showing IES technician lowering DPE pump to final depth in well SVE63 and connecting air hose in well.

Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 88 Photo #25
Date: 8-03-06 Time: 1104
Photographer: Larry Campbell
Description: Photo facing west showing IES technicians installing pitless adaptor into well SVE61.

Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 88 Photo #26
Date: 8-03-06 Time: 1115
Photographer: Larry Campbell
Description: Photo facing up showing hole in roof of GWTP where the missing exhaust stack from thermox 1 has been removed for repair.

Site: American Chemical Service, Inc.
Proj. #: 44728 AES *[46526 RAC]*
Roll: 88 Photo #27
Date: 8-03-06 Time: 1116
Photographer: Larry Campbell
Description: Photo facing west in GWTP showing Vidimus welder welding patch (lighted rectangle) over pinholes in side of thermox 1 scrubber.